

REMARKS

Applicant appreciates the time taken by the Examiner to review Applicant's present application. Applicant thanks Examiner for the allowable subject matter. Applicant has amended Claim 5, and submits that no new matter has been added by this amendment. Claims 1-4 stand rejected by the Examiner. Applicant has not amended Claims 1-4. Therefore, Claims 1-5 remain pending in the application. This application has been carefully reviewed in light of the Official Action mailed January 16, 2004. Applicant respectfully requests reconsideration and favorable action in this case.

Rejections under 35 U.S.C. § 103

Claims 1, 3 and 4 stand rejected as obvious over IBM Technical Disclosure Bulletin, Nov. 1982, TDB-ACC-NO: NN82112718 ("IBM"), in view of U.S. Patent No. 5,534,085 ("Prior"). Claim 2 stands rejected as unpatentable over IBM, in view of U.S. Patent No. 6,087,659 ("Adler"). Applicant respectfully traverses these rejections.

As to Claims 1 and 4, the Examiner states that IBM discloses an apparatus and method for determining the position of feature within a scan that is effective at the operating frequency of the scan and using a limited bandwidth video signal. In particular, the Examiner states that IBM teaches the steps of: determining a reference feature to be an edge over which a video signal changes abruptly from one level to a higher or lower level; and determining whether the beam is only turned on over a short region of the scan. Applicant respectfully disagrees and submits that IBM does not teach these limitations of the claims.

In regard to using a limited bandwidth video signal, the Examiner indicates that this is disclosed by IBM at page 1, second paragraph. In fact, none of the cited portions of IBM disclose this limitation of the claims. Instead, the cited portions of IBM disclose that the modulated backscattered electrons are then intercepted by solid-state diodes, whose output current is then converted to voltage. The output voltage of these diodes are then summed and utilized in conjunction with a system clock to identify the times when a beam goes into and out of a grid hole. In contrast, the limited video signal of Claims 1 and 4 has a limited bandwidth

relative to the frequency content of the input signal. Thus, the output current of IBM cannot server as the limited bandwidth video signal of Claims 1 and 4 as asserted by the Examiner.

In regard to the limitation of determining whether the beam is only turned on over a short region of the scan, the Examiner states that this is disclosed by IBM at paragraph 4. IBM actually discloses that the beam is blanked except over the grid holes selected to be measured. Because the beam is blanked, there is no need to determine whether the beam is only turned on over a short region of the scan. IBM therefore fails to disclose this limitation as well.

The Examiner admits that IBM does not disclose the third limitation of representing the degree of overlap between the beam on portion of the scan and the higher video level part of the feature as the total video signal accumulated in that scan. The Examiner asserts that this limitation is instead disclosed by Prior in the abstract and col. 8 lines 49-68. The cited portion of Prior, however, does not disclose this limitation. Prior discloses that the charge amplifier is reset, many exposures are made of the same pixel by strobing the beam, the charge amplifier can then accumulate packets of charge from each exposure of that one pixel to develop an appropriate output signal. (col. 8, lines 49-68) Prior does not address in any way determining a total video signal accumulated in a scan, or representing overlap between the beam and a higher video level as the total video signal, as recited in Claim 1 and 4.

Because the references fail to disclose all of the limitations of Claims 1 and 4, the Examiner has not made a prima facie case of obviousness (see M.P.E.P. 2142, 2143), and cannot properly reject the claims under 35 U.S.C. §103. Applicant therefore respectfully requests that the rejection of these claims be withdrawn.

As to Claim 3, the Examiner states that IBM discloses a method for electronically measuring parameters of a beam in a raster scan system. In regard to the limitation of moving at least one feature at the image plane having video contrast adjacent to the landing point of said plurality of pixels, the Examiner states that IBM discloses this limitation at page 2, paragraph 2. The cited portion of IBM, however, discloses only the methodology for the computation of scan errors. There is no mention of moving features at the image plane, and since no image plane has been mentioned, there can be no such image-plane feature to be moved adjacent to the landing point of any selected pixels. Clearly, then, IBM fails to disclose this limitation of Claim 3. Consequently, Applicant respectfully requests that this rejection be withdrawn as well.

As to Claim 2, the Examiner states that IBM discloses a method for determining the position of feature within a scan that is effective at the operating frequency of the scan and using a limited bandwidth video signal. In particular, the Examiner states that IBM teaches the limitation of using a limited bandwidth video signal, and that IBM in combination with Adler discloses sampling the video amplifier output at a time-delay following the unblank-blank period determined by a video amplifier bandwidth. Applicant respectfully disagrees and submits that neither IBM nor IBM combined with Adler teach these limitations of the claims.

In regard to using a limited bandwidth video signal, the Examiner indicates that this is disclosed by IBM at page 1, second paragraph. In fact, none of the cited portions of IBM disclose this limitation of the claims, as explained above. Thus IBM fails to disclose the limitation of utilizing a limited bandwidth video signal.

In regard to the limitation of sampling the video amplifier output at a time-delay following the unblank-blank period determined by a video amplifier bandwidth, the Examiner states that this is disclosed by IBM at page 1 paragraphs 3 and 4 and Adler in the abstract and at col. 2 lines 64-67 and col. 4 lines 29-37. However, nowhere in the cited passages of either IBM or Adler is it disclosed that the time delay following the unblank-blank period is determined by, or related to, the video amplifier bandwidth. Therefore, the combination of references cited by the Examiner fails to disclose this limitation as well.

Because the references fail to disclose all of the limitations of Claim 2, the Examiner has not made a prima facie case of obviousness (see M.P.E.P. 2142, 2143), and cannot properly reject Claim 2 under 35 U.S.C. §103. Applicant therefore respectfully requests that the rejection of this claim be withdrawn.

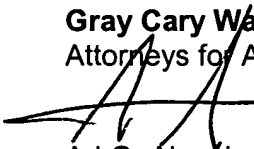
CONCLUSION

Applicant has now made an earnest attempt to place this case in condition for allowance. Other than as explicitly set forth above, this reply does not include an acquiescence to statements, assertions, assumptions, conclusions, or any combination thereof in the Office Action. For the foregoing reasons and for other reasons clearly apparent, Applicant respectfully requests full allowance of Claims 1-5. The Examiner is invited to telephone the undersigned at the number listed below for prompt action in the event any issues remain.

The Director of the U.S. Patent and Trademark Office is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 50-0456 of Gray Cary Ware & Freidenrich, LLP.

Respectfully submitted,

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